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| 10/562,145   | 12/23/2005  | Kenichi Morimoto     | 0951-0178PUS1       | 5521             |
| 2292 7590 03/26/2008<br>BIRCH STEWART KOLASCH & BIRCH<br>PO BOX 747<br>FALLS CHURCH, VA 22040-0747 |             |                      |                     |                  |
| EXAMINER   |             |                      |                     |                  |
| HA, NGUYEN Q   |             |                      |                     |                  |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

### Office Action Summary

**Application No.**

10/562,145

**Applicant(s)**

MORIMOTO, KENICHI

**Examiner**

'Wynn' Q. HA

**Art Unit**

2854

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-85/86)
- Paper No(s)/Mail Date 12/23/2005
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Objections***

Claim 9 and 10 are objected to because of the following informalities: The terms “the normal transfer bias” and “the normal fixing temperature” appear to lack proper antecedent basis, and could be changed to –a normal transfer bias– and –a normal fixing temperature–. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

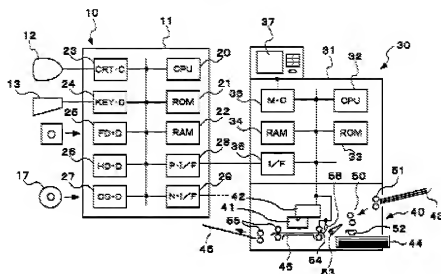
**Claims 1-3, 6-8, 12-14 and 17** are rejected under 35 U.S.C. 102(b) as being anticipated by Momose (JP 2002046309 A).

Momose teaches the following:

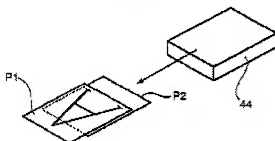
Claim 1:

An image processing apparatus (Fig. 1) comprising a paper transport system that transports paper and an image processing system that performs image forming processing for paper transported by the paper transport system, wherein

【図1】



【図14】



when, in the case that multi-feeding (Fig. 14) has occurred in which when a first paper P1 is transported by the paper transport system another paper P2 is also transported, and the other paper P2 is not positioned between the first paper and a working portion 41, 42 (print heads) of the image processing system, the working portion of the image processing system is allowed to operate (Para [0054] "If a double feed occurs with a straight pass type printer...printing will be performed only to the top print sheet P1").

Art Unit: 2854

Claim 2:

All that is claimed, including image forming processing for the first recording paper P1 by the image forming system being continued (as to print an image "A" shown in fig. 14).

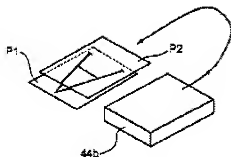
Claim 3:

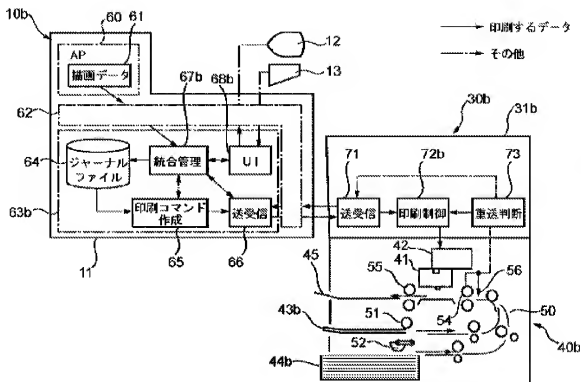
All that is claimed, including the contact face of the first recording paper P1 contacted by a feed member 52 (Fig. 1) is the image forming face, image forming processing for the first recording paper P1 by the image forming system is continued (as to print an image "A" shown in fig. 14).

Claim 6:

An image processing apparatus (Fig. 13) provided with all the elements being claimed, including

【 15 】





when the contact face of the first recording paper P1 contacted by the feed member 52 is not the image forming face, image forming processing for the first recording paper P1 (and/or P2) by the image forming system is prohibited (Para [0055]-[0059] "If a double feed occurs with a front feeding type printer [Fig. 13]...printing would be performed over the print sheet P2 located in the top here, and the print sheet P1 located in the bottom. For this reason, if a double feed occurs, it would be a printing mistake...[Thus] when the transmission and reception section receives double feed error status...transmission of the print command is suspended...The integrated management department displays a preview screen and a page guide on the user interface and displays the purport of double feed." Para [0071] "after the stop of print operation and transmission of double feed error status and the double feed error judgment part,

Art Unit: 2854

resumption of printing by a user performing re-setting of a print sheet and the feed button of the printer being pushed, etc).

Note that the feed member 52 doesn't contact image forming face of the recording paper P1 (or P2) since the image forming system 41, 42 forms an image on the other face of the paper, as shown in fig. 13.

Claim 7:

The image forming apparatus according to claim 6, wherein a detector 56 that detects multi-feeding of the first recording paper and the other recording paper is provided between the placement stage of the recording paper and the image forming portion of the image forming system (Para [0006] "a double feed detection means 56 to detect a double feed error in the state where print sheets overlap").

Claim 8:

The image forming apparatus according to claim 7, wherein the detector 56 detects multi-feeding by detecting an edge portion of the multi-fed other recording paper (Para [0031] & [0032] "the paper length sensor 56...measures form height [ i.e. recording paper length measured from a leading edge to a trailing edge] from the amount of form fed by the feed roller 54...When the print sheet length measured is longer than the applicable page printing form height...the double feed judgment part judges that the double feed was carried out").

Claim 12:

The image forming apparatus according to claim 2, wherein a trailing edge detector 56 is provided that detects the (leading edge and) trailing edge of the recording paper, and

when image formation is performed in the case that multi-feeding has occurred, a reference for judging the occurrence of defects based on the detection information of the trailing edge of the recording paper from the trailing edge detector is changed to a reference taking into consideration the extent of multi-feeding (as discussed in claim 8).

Claim 13:

The image forming apparatus according to claim 7, wherein a notifier 12 is provided that, in the case that multi-feeding has been detected by the detector, makes such a notification (Abstract "In the case a transceiver part 66 of the printer host 10 receives the duplicate dispatch error status, a user interface 68 makes a display device 12 display the duplicate dispatch error generation").

Claim 14:

The image forming apparatus according to claim 13, wherein the notifier makes a notification of information of the recording paper for which image formation could not be performed due to multi-feeding (Para [0029] Examples, "Please remove the paper which is not printed out of the paper to which paper was delivered, and resume printing." "Please take out the paper with which only one side is printed out of the paper to which paper was delivered, and set the paper the top on a paper feed tray")..

Claim 17:

An image processing apparatus (See claim 1) that is used to practice an image forming method comprising all the steps being claimed.

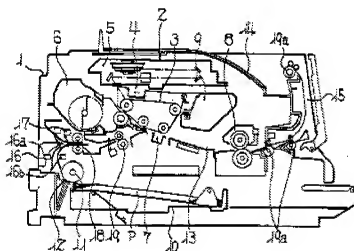
**Claims 4, 7, 8, 16 and 18** are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi (JP 07125351 A).

Kobayashi teaches the following:

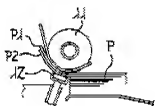
Claim 4:

An image forming apparatus (Fig. 2) provided with a movable feed member 11 that supplies recording paper P by making contact with recording paper that has been placed on a placement stage and extracting that recording paper from the placement stage with frictional force between the feed member and the contacted recording paper, and an image forming system 6 that forms an image on the recording paper supplied by the feed member, wherein

【図2】



【図3】



when, in the case that multi-feeding has occurred in which when a first recording paper P1 is transported by the feed member 11 another recording paper P2 is also supplied, and the contact face of the first recording paper contacted by the feed member is not the image forming face, image forming processing for the other recording paper by the image forming system is continued (Abstract "A detection signal is supplied from the multi-feeding detector when two or more papers overlap. Based on the measured distance, the output timings of the main scanning direction or sub scanning direction signal is changed so that the image is printed only on the last paper P2 among the papers which overlap with each other").

Note that the feed member 11 doesn't contact image forming face of the recording paper P1 (or P2) since the image forming system 6 forms an image on the other face of the paper, as shown in fig. 2.

Claim 7:

The image forming apparatus according to claim 4, wherein a detector 16 (Para [0012] "double feed detector 16") that detects multi-feeding of the first recording paper and the other recording paper is provided between the placement stage of the recording paper and the image forming portion of the image forming system.

Claim 8:

The image forming apparatus according to claim 7, wherein the detector 16 detects multi-feeding by detecting an edge portion of the multi-fed other recording paper (Para [0012] "The double feed detector 16 is a structure which detects whether the paper P of two or more sheets P1, P2 lapped with the light income of the light that penetrates the paper P. The detector consists of the photo-diode 16a and the photo-transistor 16b." Para [0023] "the

Art Unit: 2854

distance from the tip of a top paper P1 to the tip of the last paper P2...is outputted from the double feed detector 16").

Claim 16:

An electronic equipment, wherein the image forming apparatus according to claim 4 is a scanner apparatus, copy apparatus, or facsimile apparatus (Para [0001] "copy machine, facsimile") or a multifunction machine in which any two or more of these are combined.

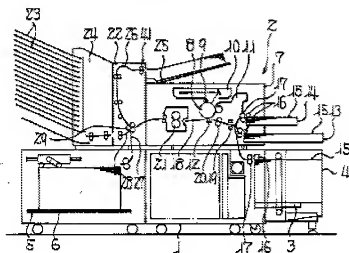
Claim 18:

The image forming apparatus that is used to practice an image forming method comprising all the steps being claimed.

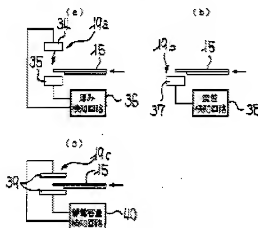
**Claim 5** is rejected under 35 U.S.C. 102(b) as being anticipated by Senma (JP 07140854 A).

Senma teaches an image forming apparatus (Fig. 4) comprising a recording paper transport system (feed rollers 17) that transports recording paper 15 and an image forming system 8 that forms an image on recording paper transported by the recording paper transport system, wherein

【図4】



【図6】



when, in the case that multi-feeding (Fig. 6) has occurred in which when a first (top) recording paper is transported by the recording paper transport system another (bottom) recording paper is also transported, and the other (bottom) recording paper is positioned between the first recording paper and an image forming portion 8 of the image forming system, image forming processing for the first (and/or second) recording paper by the image forming system is prohibited (Abstract "When the recording papers 15 are fed one over lapping the other, only their carrying actions are permitted and the output of the picture data for the

Art Unit: 2854

corresponding recording paper is inhibited and when the next recording paper is normally separated and fed, the carrying action of the recording paper and the output of the picture data are permitted").

Note that the second (bottom) recording paper 15 will be positioned between the first (top) recording paper 15 and the image forming portion 8 in case of a double feed, as shown in figs 4 and 6.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi in view of Yoshimoto (JP 05088564 A).

Kobayashi teaches the image forming apparatus according to claim 4.

Kobayashi doesn't teach increasing a transfer bias from a normal transfer bias when performing image formation in the case that multi-feeding has occurred.

Yoshimoto teaches an image forming apparatus, in which a transfer bias is increased from the normal transfer bias when performing image formation in the case that multi-feeding has occurred, in order to sufficiently transfer toner to produce a good image, thus prevent waste of paper that might otherwise receive a poor image onto it (Abstract).

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to also have Kobayashi's apparatus increase a transfer bias from the

normal transfer bias when performing image formation in the case that multi-feeding has occurred, in order to sufficiently transfer toner to produce a good image, thus prevent waste of paper that might otherwise receive a poor image onto it, as taught by Yashimoto.

**Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi in view of Nakagawa (JP 07295311 A).

Kobayashi teaches the image forming apparatus according to claim 4.

Kobayashi doesn't teach increasing a fixing temperature from a normal fixing temperature when performing image formation in the case that multi-feeding has occurred.

Nakagawa teaches an image forming apparatus, in which a fixing temperature is increased from a normal fixing temperature when performing image formation in the case that the recording paper is thick, in order to provide an excellent image (Abstract).

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to have Kobayashi's apparatus increase a fixing temperature from a normal fixing temperature when performing image formation in the case that multi-feeding has occurred (because the doubly fed recording papers are virtually thicker than a singly fed paper), in order to provide excellent image, as taught by Nakagawa.

**Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi in view of Morishita et al. (US 5,485,247).

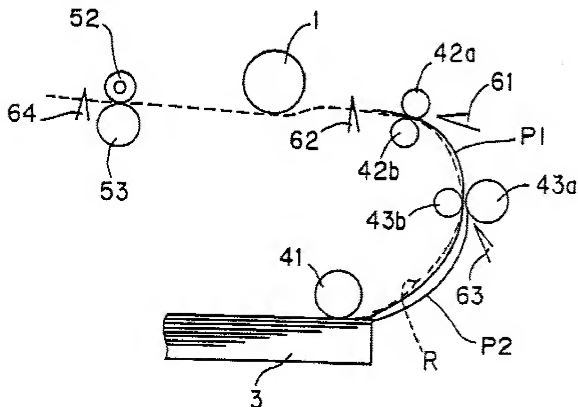
Kobayashi teaches the image forming apparatus according to claim 4.

Kobayashi doesn't teach a trailing edge detector being provided that detects the trailing edge of the recording paper, and when image formation is performed in the case that multi-

Art Unit: 2854

feeding has occurred, the detection information of the trailing edge of the recording paper from the trailing edge detector is treated as void.

Morishita teaches an image forming apparatus having a trailing edge detector 61 (Col. 4 lines 55-56 "when the trailing edge of the paper sheet passes through the first paper detecting switch 61"), and when image formation is performed in the case that multi-feeding has occurred, the detection information of the trailing edge of the recording paper from the trailing edge detector is treated as void, in order to improve reliability of jam detection even if a multi-feeding has occurred (Col. 3 lines 1-14 "Even if a duplicate paper feeding state occurs, it is not judged that a paper jam has occurred only by the fact that a duplicate paper feeding state has occurred.



Specifically, when the paper sheets pass through the registration roller one at a time, it is not erroneously judged that a paper jam has occurred. It is possible to satisfactorily feed all the

plurality of paper sheets, which are simultaneously fed in a duplicate paper feeding state, to the image forming section.

Therefore, the reliability of the judgment that a paper jam has occurred is improved. In addition, it is possible to save the wasted time and labor of correcting the erroneous judgment that a paper jam has occurred. Furthermore, it is possible to reliably use the intact paper sheets for forming an image, so that paper sheets are not wasted").

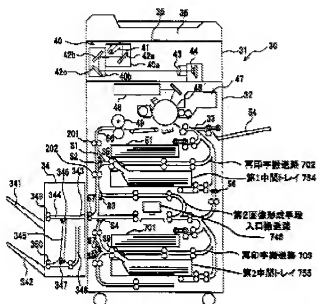
**Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Momose in view of Irihara (JP 2002193559 A).

Momose teaches an electronic equipment with an image processing apparatus according to claim 1 (which is an ink jet printer).

Momose doesn't teach the image processing apparatus being a scanner apparatus, copy apparatus or facsimile apparatus, or a multifunction machine in which any two or more of these are combined.

Irihara teaches an electronic equipment having an image processing apparatus being a multifunctional machine in which an ink jet printer 746, an electrographic printer 48 and a scanner apparatus 40 are combined, in order to "provide a simply constituted image forming device capable of executing printing processing or image processing efficiently and fast no matter what kind of multiple-faced or double-sided image the document image is, and whether one-sided printing or double-sided printing is executed (Abstract)."

Art Unit: 2854



It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine a scanner apparatus and an electrographic printer with Momose's apparatus, in order to provide a simply constituted image forming device capable of executing printing processing or image processing efficiently and fast no matter what kind of multiple-faced or double-sided image the document image is, and whether one-sided printing or double-sided printing is executed, as taught by Irihara.

### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to 'Wynn' Q. HA whose telephone number is (571)272-2863. The examiner can normally be reached on Monday - Friday, from 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2854

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NQH  
March 15, 2008

/Daniel J. Colilla/  
Primary Examiner  
Art Unit 2854